



National Aeronautics
and Space Administration

NOVEMBER 29, 1996
NRA 96-OSS-14

RESEARCH ANNOUNCEMENT

ANCIENT MARTIAN METEORITE RESEARCH PROGRAM

97-007456/VB

Notice of Intent to Propose:
Proposals Due:

December 16, 1996
January 29, 1997

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**NASA Research Announcement
Soliciting Proposals
for
Ancient Martian Meteorite Research**

NRA 96-OSS-14

**Issued: November 29, 1996
Proposals Due: January 29, 1997**

**Office of Space Science
National Aeronautics and Space Administration
Washington, DC 20546-0001**

ANCIENT MARTIAN METEORITE RESEARCH

This NASA Research Announcement (NRA) is a special announcement for the NASA component of a joint program with the National Science Foundation (NSF) to study ancient Martian meteorites. This announcement initiates the NASA part of the Ancient Martian Meteorite (AMM) program that is a cooperative program to stimulate research in response to the intriguing, but controversial, findings of possible life in ancient Martian meteorite ALH84001. Proposals to NASA are solicited for studies concerning ancient Martian meteorite research that repeat and expand on those already conducted on Martian meteorite ALH84001 as well as other relevant research. Simultaneous with this announcement, NSF is issuing a "Dear Colleague" letter soliciting proposals with similar objectives.

Participation in this program is open to all categories of organizations, domestic and foreign, including educational institutions, industry, for profit and not for profit organizations, and NASA Centers and other U.S. Government agencies. Minority and disadvantaged institutions are particularly encouraged to apply to this NRA. Selection for funding under this NRA will be based on, with equal priority, (i) science and technical merit, (ii) relevance to the objectives of this NRA in the context of NASA's programs in space science, and (iii) cost. NASA and NSF will coordinate evaluation of proposals received by the respective Agencies to ensure that the research is integrated across the Agencies and to preclude unnecessary duplication of efforts.

Appendix A provides specific technical and program information concerning the general area in which proposals are sought. Appendix B provides general instructions and provisions relevant to submitting a proposal. Appendix C provides a model format for summary information that must preface each proposal. Furthermore, a Proposal Information Package (PIP) provides a description of the Martian meteorite ALH84001, results of its analysis and other relevant information about it, and other Antarctic meteorites. Appendices and the PIP may be accessed via the World Wide Web after this NRA is released. This NRA and its appendices can be accessed through the Office of Space Science home page at <<http://www.hq.nasa.gov/office/oss/research/htm>>, and the PIP may be accessed at <<http://sn-charon.jsc.nasa.gov/indexx.htm>>. Upon written request, paper copies are also available from Jorge Scientific (address below). The following summary information applies to this NRA:

- Identifier: NRA 96-OSS-14
- Due date for Notice of Intent to propose: December 16, 1996
- Proposal length: 12 pages (not including figures or tables)

- Proposal due date: January 29, 1997
- Required proposal copies: Signed original plus 15 copies
- Address for submission of both
Notice of Intent and proposal: Ancient Martian Meteorite NRA
Jorge Scientific Corporation
Suite 700
400 Virginia Avenue, SW
Washington, DC 20024 USA

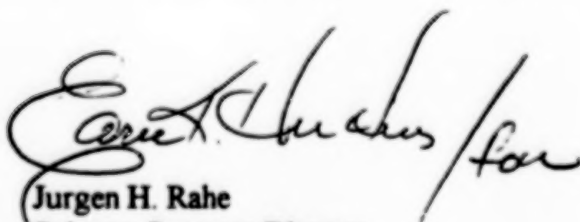
Phone: 202-554-2775

Proposals may not be submitted by facsimile or E-mail.

For Notice of Intent submission only:
Facsimile: 202-554-3042 or 202-554-2970
E-mail: debra.tripp@hq.nasa.gov

- Selecting official: Director
Research Program Management Division
Office of Space Science
- Contact for additional information: Joseph M. Boyce
Discipline Scientist, Cosmochemistry
Code SR
Office of Space Science
National Aeronautics and Space Administration
Washington, DC 20546-0001
Telephone: 202-358-0302
Facsimile: 202-358-3097
E-mail: joseph.boyce@hq.nasa.gov

Your interest and cooperation in this program are appreciated.



Jurgen H. Rahe
Science Program Director
Solar System Exploration
Office of Space Science

Enclosures

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DESCRIPTION OF OPPORTUNITY

ANCIENT MARTIAN METEORITE PROGRAM

1. PROGRAM DESCRIPTION

The Ancient Martian Meteorite (AMM) program supports studies that repeat and expand on those already reported on Martian meteorite ALH84001 as well as other ancient Martian meteorites that may be discovered in the near future. The goal of the AMM program is to further investigate and resolve, to the extent possible, recent claims of a possible biological origin for certain phenomena within ALH84001 (McKay *et al.*, 1996). The Office of Space Science, NASA, and the Office of Polar Programs and the Division of Chemistry, NSF, are simultaneously announcing, respectively, new research opportunities to focus research on Martian meteorites whose results will affect our understanding of life in the universe and have ramifications for future Mars missions, including handling of samples that may be returned from Mars.

2. DESCRIPTION OF OPPORTUNITY

2.1 RESEARCH OPPORTUNITY

The AMM program supports laboratory, theory, data analysis and synthesis, simulations, analog, and modeling studies that will further the investigation and resolution of the claim of biological origin for phenomena within Martian meteorite ALH84001. Consideration of both the great age of ALH84001 and the nature of the recently reported observations of evidence of biological activity requires focus on studies that repeat and expand on those already reported on ALH84001, as well as other ancient Martian meteorites that may be discovered in the near future. Studies of other Martian meteorites for evidence of features similar to those found in ALH84001 will also be given high priority. Within the scope of the program, but at a lower priority, will be studies of meteorites and terrestrial analogs for those minerals, chemical, and morphological features that have been observed in ALH84001 and that have been interpreted as evidence of life. Similarly, studies of non-Martian meteorites that seek to understand the likelihood that contamination on Earth or in space could be misinterpreted as evidence for biogenic activity will be within the scope of this program. Proposals for major pieces of instrumentation (over approximately \$10K) are not within the scope of this program.

Beyond repeating and expanding the studies reported, the following are examples of the studies that may enhance our understanding of what ALH84001 tells us about ancient Mars:

- 1) Search for more biomarkers. Because Polycyclic Aromatic Hydrocarbon can be made by such a variety of mechanisms, both biological and nonbiological, demonstration of former biological activity in ALH84001 requires identification of organic compounds (biomarkers) for which only a biological source is plausible. In addition, a search for unequivocal mineral biomarkers and a comparison of the characteristics of biologically formed minerals compared to inorganically formed minerals is desirable.
- 2) Search for internal structure in the fossil-like objects. Because external morphology, particularly if taken alone, can be ambiguous, confirmation of a biological origin for the fossil-like objects requires demonstration of internal architecture characteristic of cellular life. Therefore, elemental, and possibly molecular, analysis of the putative microfossil structures is sought.
- 3) Improved estimates of carbonate formation temperature. Because the previous estimated temperature for carbonate formation (Harvey and McSween, 1996) is too high to have supported biological activity or perhaps permitted preservation of microorganisms, confirmation or revision of that temperature is sought that could have profound implications from interpretation of fossil-like forms within the carbonate.
- 4) Precise age-dating of the carbonate lithology. Although there seems to be no reason to question the widely cited 3.6 Ga age for the carbonates, confirmation or revision of that age seems prudent and is, therefore, sought.
- 5) Isotopic composition of organic matter and/or biominerals. Because biological processes are known to fractionate such elements as carbon and sulfur, isotopic measurements of organic matter or biomineral and the reservoir is essential. In addition, comparison with isotopic, molecular, and data on organics from other meteorite types could shed light on possible formation mechanisms for the Martian organics.

2.2 FUNDING

It is estimated that the NASA funding level for the AMM program in Fiscal Year (FY) 1997 will be about \$1M with an additional \$0.5M in FY 1998, which is expected to support approximately 10 to 15 research investigations. Because this is a new program, all investigations will be considered new starts. Investigations may propose for either a one or two year period of performance.

2.3 EDUCATION AND PUBLIC OUTREACH

"Partners in Education: A strategy for Integrating Education and Public Outreach Into NASA's Space Science Programs" describes the Office of Space Science's approach for making education at all levels and the enhancement of the public understanding of science

integral parts of space science research activities. The follow-on implementation plan, "Implementing the Office of Space Science (OSS) Education/Public Outreach Strategy," Produced by the Education/Public Outreach Task Force of the Space Science Advisory Committee (SSAC) was published October 15, 1996. Copies of the OSS educational outreach strategy and the implementation plan may be obtained from Dr. Jeffrey D. Rosendhal, Office of Space Science, Code S, NASA Headquarters, Washington, DC 20546.

Education/public outreach are now expected to be part of each flight program and research discipline. This policy is being implemented through a mixture of mission/project-specific outreach activities, plus education/public outreach activities conducted by individual researchers. NASA strongly encourages researchers to actively engage in education/public outreach and proposers are encouraged to include education/public outreach activities in their proposals.

Scientific excellence of proposed investigations will continue to be the primary selection criterion. Proposals will not be selected solely or primarily on the strength of their education/outreach component, although the quality of a proposed education/public outreach effort could be used as an additional factor in selecting among otherwise equal and scientifically excellent proposals. Evaluation criteria for the education component will include:

- The educational effectiveness and realism of program concept.
- The leveraging of existing resources and the prospect for the program to have a multiplier effect.
- The capability of proposer to carry out proposed program
- The consistency with National educational reform efforts
- Realism and adequacy of the budget.

3. PROPOSAL PREPARATION AND SUBMISSION

3.1 GENERAL PROVISIONS

Proposals should be prepared in accordance with the guidelines in Appendix B, except for the provisions identified below. In case of conflict, the provisions below take precedence.

Proposers may propose investigations requiring periods of performance of up to two years, although NASA can provide awards for only one year at a time. Continued funding is subject to availability of funds and demonstration of satisfactory progress. Receipt of a satisfactory annual progress report will be required before supplementary funding can be provided for the second year following the first year of a two-year award. These progress reports should be submitted three months prior to the award anniversary.

Proposals must be typewritten in English.

3.2 NOTICE OF INTENT TO PROPOSE

Submission of a Notice of Intent (NOI) to propose to this NRA is strongly urged. Submission of a NOI does not commit the sender to submit a proposal, nor are Co-Investigator (Co-I) commitments binding. The NOI should include:

- reference to the NRA by its alpha-numeric identifier;
- the names, addresses, telephone numbers, and E-mail addresses of the Principal Investigator and of the anticipated Co-Investigators;
- a descriptive title of the expected investigation; and
- a brief description of the investigation to be proposed.

The NOI must be submitted by December 16, 1996.

3.3 SPECIFIC PROPOSAL PREPARATION INFORMATION

The following new provisions are modifications to Appendix B and, where there is a conflict, the provisions outlined below have precedence.

A. The "Conformance to Guidance," Section 5, and "Proposal Content," Section 7, of Appendix B are modified as follows:

The first five pages (Cover Sheet, Proposal Abstract, Full Budget Summary, Yearly Budget Summary, Current and Pending Support) of each proposal constitute summary sheets that must follow the sample formats in Appendix C. Note that the "Transmittal Letter or Prefatory Material," Section 7. b. of Appendix B, still applies and that complete, detailed budget and cost breakdowns must still appear in the main body of this proposal. The original copy of the proposal must bear the original signature of a responsible official or authorized representative of the organization, or any other person authorized to commit contractually or obligate the organization (unless the signature appears on the proposal itself). The remainder of the proposal immediately following these five pages (with the exception of the abstract) should be prepared using the guidelines in Appendix B Section 7, e. through l.

Also included in Appendix C are form ED80-0004 "Certification Regarding Drug-Free Workplace Requirements Grantees Other Than Individuals," and form ED GCS-008 (REV. 12/88) "Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primary Covered Transactions." One set of these completed forms must be included with the original signature version of the proposal. Finally, any proposal requesting total cumulative funding of \$100,000 or more must include a "Certification Regarding Lobbying" signed by a responsible official or authorized representative (a copy is included in Appendix C).

B. The following statements are added to the "Proposal Contents," Section 7, of Appendix B:

The responsibilities and contributions of the Principal Investigator, and Co-Investigators must be clearly enumerated within the body of the proposal. Where a proposal contains multiple independent tasks, this information must be provided on a task by task basis.

For proposals with multiple independent tasks, the resource allocations among the tasks (including personnel and other costs) must be clearly enumerated in the Budget Summary sheet (use a separate sheet for each task) at the beginning of the proposal.

Finally, for proposals with multiple independent tasks, the PI must identify and fully justify no more than five tasks to be given the highest priority in the first year of effort.

C. The following statements are added to the "Project Description," Section 7. e, of Appendix B:

A specific titled section describing the relevance of the proposed research to the AMM program objectives should be included in the body of the proposal. The length of this section should be no more than one page and should address the relevance of the proposed research to furthering the investigation and resolution of the claim of biological origin for phenomena within Martian meteorite ALH84001.

The Project Description must clearly identify the roles and responsibilities of the Principal Investigator, Co-Investigators, and collaborators for the proposed research. Generally, Co-Investigators are those who will make a critical or significant contribution to the proposed research and may (but are not required to) receive a portion of the funding, if the proposal is selected. Evidence of commitment on behalf of the Co-investigator(s) is (are) required and may take the form of a letter from the Co-investigator or an authorized institutional official.

D. "Length," Section 9, of Appendix B is modified as follows:

The body of the proposal (the technical and science section) is limited to twelve (12), typewritten pages, single sided with appropriate margins using easily readable fonts (e.g., 12 point or larger). The twelve page limit does not include: Cover Sheet, Proposal Abstract, Budget Summaries, Table of Contents, references, figures, detailed budgetary information, certifications or appendices (including sample request, see Section 3.4 below). However, an absolute page limit of 50 pages of all material in the proposal is imposed. The proposals may not be bound with spiral binders or backing tape.

E. Paragraph a. and b. of Section 13. on "Evaluation Factors" are replaced in their entirety by the following:

a. Recommendations for selection of a proposal will be based on evaluations of the following, which have approximately equal weight: (1) intrinsic scientific and technical merit; (2) relevance to objectives of the AMM program in the context of NASA's space science program; and (3) reasonableness, realism, and total amount of proposed cost. An additional evaluation factor of lesser weight is the quality of the education plan, if included.

F. Section 14, "Evaluation Techniques," Appendix B contains the following additions:

An initial peer review of proposals received by NASA in response to this NRA to the AMM program will be conducted by NASA, supported by Jorge Scientific Corporation during early 1997. Members of the peer review panel and those individuals solicited for mail reviews of proposals may include individual scientists who currently receive support from NASA research programs. Because NASA takes seriously its responsibility for ensuring that the details of the process are kept confidential and for protecting proposers against conflicts of interest in the review process, all non-Government reviewers are required to submit nondisclosure statements prior to their participation in the evaluation process. Although proposers are provided with explanations for the final decisions regarding their proposals, reviewer identities and panel deliberations are held in confidence. A list of the winning proposals will be provided upon request.

Initial review of proposals submitted to NSF will be by the Division of Chemistry and the Office of Polar Programs, NSF.

Following initial review by both agencies, proposals will be considered by a joint NASA/NSF panel to ensure that research is well integrated and that unnecessary duplication of effort is avoided. Proposals for collaborative work between the scientific communities supported by NASA and NSF, whose proposals are submitted in parallel to their respective agencies, will be considered jointly.

The final decisions for the NASA AMM program are made by the NASA Director, Research Program Management Division, Office of Space Science, incorporating the recommendations of the review panel, recommendations of the joint NASA/NSF panel, and considerations related to funds available to the program.

3.4 GUIDELINES FOR ANTARCTIC METEORITE SAMPLE REQUESTS

Proposers who wish to perform experiments on Antarctic meteorites should submit a request for the required materials to the Meteorite Working Group (MWG), a peer-review committee which helps to guide the collection, curation, allocation, and distribution of the

U.S. collection of Antarctic meteorites. All requests for samples of Antarctic meteorites must be made in writing using the following guideline and sent to:

Curator, Antarctic Meteorites
SN2/Planetary Missions and Materials Branch
NASA Johnson Space Center (JSC)
Houston, TX 77058 USA
Phone: (281) 483-5135
FAX: (281) 483-5347
E-mail: mlindstrom@snmail.jsc.nasa.gov

Requests that are received by the MWG Secretary before January 29, 1997, will be reviewed at the MWG meeting of February 1997 following the AMM program peer review panel meeting. **THEREFORE REQUESTS MUST BE SUBMITTED ON TIME IN ORDER TO ENSURE THE CREDIBILITY OF A PROPOSAL IN RESPONSE TO THIS NRA.** Questions pertaining to sample requests can be directed in writing to the above address.

Requests for samples are welcomed from research scientists of all countries, regardless of their current state of funding for meteorite studies or whether or not they submit a proposal in response to this NRA. All sample requests will be reviewed in a timely manner. Issuance of samples does not imply a commitment by any agency to fund the proposed research. Requests for financial support must be submitted separately to the appropriate funding agencies. As a matter of policy, U.S. Antarctic meteorites are the property of the National Science Foundation and all allocations are subject to recall.

Each request should accurately refer to meteorite samples by their respective identification numbers. Specific requirements for mass and type of sample (chip, PM, lithology) from within individual specimens, or special handling or shipping procedures, should be explained in each request. Each request should include a brief justification that should contain: 1) what scientific problem will be addressed; 2) what analytical approach will be used; 3) evidence that the proposed analyses can be performed by the requester or collaborators; and 4) why Antarctic meteorites are best suitable for the investigation. Requests for small or rare meteorites, such as Martian and Lunar meteorites, should be for the minimum amount of sample required to do the analysis. For new or innovative investigations, proposers are encouraged to supply additional detailed information in order to assist the MWG. Requests for thin sections that will be used in destructive procedures such as ion probing, etching, or repolishing must be stated explicitly. Consortium requests must be countersigned by a member of each group in the consortium. All necessary information, in most cases, should be condensable into a one-or two-page letter. However, the proposal to the AMM program can be appended to the Antarctic meteorite sample request.

Samples can be requested from any meteorite that has been made available through announcement in any issue of the *Antarctic Meteorite Newsletter* (beginning with 1 (1) in June 1978). Many of the meteorites have also been described in five *Smithsonian Contributions to Earth Science*: Nos. 23, 24, 26, 28, and 30. A table containing all

classifications as of December 1993 is published in *Meteoritics* 29 (1) p. 100-142 and updated as of April 1996 in *Meteoritics and Planetary Science* 31, A16 I -A1 74. Additional information may also be obtained via the World Wide Web at: <<http://www-curator.jsc.nasa.gov/antmet/marsmet/text.htm>>.

A copy of your request for a sample (if appropriate) should be included in your proposal to the AMM program, as well as submitted to the MWG. The request is not included in the proposal page limit.

3.5 GUIDELINES FOR FOREIGN PARTICIPATION

Proposals from non-U.S. entities should not include a cost plan. Non-U.S. proposals and U.S. proposals which include non-U.S. participation, must be endorsed by the respective government agency or funding/sponsoring institution in that country from which the non-U.S. participant is proposing. Such endorsement should indicate:

- (1) The proposal merits careful consideration by NASA.
- (2) If the proposal is selected, sufficient funds will be made available to undertake the activity as proposed.

Proposals, along with the requested number of copies and Letters of Endorsement, must be forwarded to NASA in time to arrive before the deadline established for this NRA. These documents should be sent to:

Ancient Martian Meteorites NRA
Jorge Scientific Corporation
Suite 700
400 Virginia Avenue, SW
Washington, DC 20024
USA

At the same time, one copy of the proposal and the letters of endorsement should be sent to:

Ms. Shiron D. Gaines
Ancient Martian Meteorites NRA
Code IS/International Science and Aeronautics Division
NASA Headquarters
Washington, DC 20546-0001 USA

All proposals must be received before the established closing date. If review and endorsement are not possible before the announced closing date, sponsoring non-U.S. agencies may, in exceptional situations, forward a proposal without endorsement to

NASA's International Science and Aeronautics Division, Code IS, along with the date when a decision can be expected.

All proposals must be typewritten in English. All non-U.S. proposals will undergo the same evaluation and selection process as those originating in the U.S. Non-U.S. proposals, and U.S. proposals which include non-U.S. participation, must follow all other guidelines and requirements described in this NRA.

Successful and unsuccessful proposers will be contacted directly by the NASA Program Office coordinating the NRA. Copies of these letters will be sent to the sponsoring government agency.

Should a non-U.S. proposal or a U.S. proposal with non-U.S. participation be selected, the NASA International Science and Aeronautics Division will arrange with the non-U.S. sponsoring agency for the proposed participation on a no exchange of funds basis, in which NASA and the non-U.S. sponsoring agency will each bear the cost of discharging its respective responsibilities. Depending on the nature and extent of the proposed cooperation, these arrangements may entail:

- (1) A letter of notification by NASA; and
- (2) An exchange of letters between NASA and the sponsoring governmental agency, or
- (3) A formal agency-to-agency Memorandum of Understanding (MOU).

4. SOURCES OF INFORMATION AND DATA

The following information may be useful for preparing a proposal for this announcement.

4.1 PROPOSAL INFORMATION PACKAGE

A Proposal Information Package (PIP) is available that provides a detailed description of Martian meteorite ALH84001 and research results from analysis of ALH84001, as well as other useful information about Antarctic meteorites. The PIP is available electronically via the World Wide Web on the release date of this NRA, and may be accessed through URL <http://sn-charon.jsc.nasa.gov/indexx.htm>. Technical questions concerning the PIP may be addressed to E-mail: mlindstrom@snmail.jsc.nasa.gov.

The PIP may be updated with relevant information (e.g., answers to questions, clarification of recent results) anytime prior to proposal submission due date. Upon request, paper copies are also available from Jorge Scientific:

Ancient Martian Meteorite (PIP)
Jorge Scientific, Incorporated
Suite 700
400 Virginia Avenue, SW
Washington, DC 20024

4.2 GENERAL PLANETARY INFORMATION

General planetary information is available through:

The Lunar and Planetary Institute (LPI)
3600 Bay Area Boulevard
Houston, TX 77058-1113
(Phone: 281-486-2100) (Fax 281-486-2106)

which is the most concentrated and readily accessible source of information on meteoritical science. Among the many valuable services available to the science community from the LPI are:

LPI BULLETIN - A periodic information bulletin published for free distribution to interested scientists and other individuals upon request.

LUNAR AND PLANETARY DATA CENTER - The LPI maintains an extensive library of materials that are available for on site use and, in special cases, for loan. The Data Center also serves as a source of general information at the JSC Curatorial Facility.

LIBRARIAN SERVICES - Literature aids, bibliographies, and conference proceedings can be provided.

STAFF SCIENTISTS - Scientists who are active in lunar and planetary research, and who are involved in the maintenance of the Lunar and Planetary Data Center, are available to assist in examination of data prior to proposal preparation.

WORLD WIDE WEB SITE - The LPI has a home page that provides more information about the possibility of fossil life in ALH84001 and can be accessed at
<<http://cass.jsc.nasa.gov/lpi.html>>.

References:

R. Harvey and H. P. McSween Jr., Nature 382, 49 (1996).

D. S. McKay, E.K. Gibson, K. L. Thomas-Keprta, L. H. Vali, C. S. Romanek, S. J. Clemett, Z. D. F. Chillier., C.R. Maechling, and R. N. Zare, Science 273, 924 (1996).

**GIDELINES FOR RESPONDING TO
NASA RESEARCH ANNOUNCEMENTS (NRA)
FOR SOLICITED BASIC RESEARCH PROPOSALS**

JUNE 1995

**OFFICE OF PROCUREMENT
NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION
WASHINGTON, DC 20546
INSTRUCTIONS FOR RESPONDING TO
NASA RESEARCH ANNOUNCEMENTS
(JUNE 1995)**

1. Foreword

a. These instructions apply to "NASA Research Announcements." The "NASA Research Announcement (NRA)" permits competitive selection of research projects in accordance with statute while preserving the traditional concepts and understandings associated with NASA sponsorship of research.

b. These instructions are Appendix I to 1870.203 of the NASA Federal Acquisition Regulation Supplement.

2. Policy

a. Proposals received in response to an NRA will be used only for evaluation purposes. NASA does not allow a proposal, the contents of which are not available without restriction from another source, or any unique ideas submitted in response to an NRA to be used as the basis of a solicitation or in negotiation with other organizations, nor is a pre-award synopsis published for individual proposals.

b. A solicited proposal that results in a NASA award becomes part of the record of that transaction and may be available to the public on specific request; however, information or material that NASA and the awardee mutually agree to be of a privileged nature will be held in confidence to the extent permitted by law, including the Freedom of Information Act.

3. Purpose

These instructions supplement documents identified as "NASA Research Announcements." The NRAs contain programmatic information and certain requirements which apply only to proposals prepared in response to that particular announcement. These instructions contain the general proposal preparation information which applies to responses to all NRAs.

4. Relationship to Award

a. A contract, grant, cooperative agreement, or other agreement may be used to accomplish an effort

funded in response to an NRA. NASA will determine the appropriate instrument.

b. Grants are generally used to fund basic research in educational and nonprofit institutions, while research in other private sector organizations is accomplished under contract. Contracts resulting from NRAs are subject to the Federal Acquisition Regulation and the NASA FAR Supplement (NHB 5100.4). Any resultant grants or cooperative agreements will be awarded and administered in accordance with the NASA Grant and Cooperative Agreement Handbook (NPG 5800.1).

5. Conformance to Guidance

a. NASA does not have mandatory forms or formats for responses to NRAs; however, it is requested that proposals conform to the guidelines in these instructions. NASA may accept proposals without discussion; hence, proposals should initially be as complete as possible and be submitted on the proposers' most favorable terms.

b. To be considered responsive, a submission must, at a minimum, present a specific project within the areas delineated by the NRA; contain sufficient technical and cost information to permit a meaningful evaluation; be signed by an official authorized to legally bind the submitting organization; not merely offer to perform standard services or to just provide computer facilities or services; and not significantly duplicate a more specific current or pending NASA solicitation.

6. NRA-Specific Items

Several proposal submission items appear in the NRA itself: the unique NRA identifier, when to submit proposals; where to send proposals; number of copies required; and sources for more information. Items included in these instructions may be supplemented by the NRA.

7. Proposal Contents

a. The following information is needed to permit consideration in an objective manner. NRAs will generally specify topics for which additional information or greater detail is desirable. Each proposal copy shall contain all submitted material, including a copy of the transmittal letter if it contains substantive information.

b. **Transmittal Letter or Prefatory Material.** (1) The legal name and address of the organization and specific division or campus identification if part of a larger organization;

(2) A brief, scientifically valid project title intelligible to a scientifically literate reader and suitable for use in the public press;

(3) Type of organization: e.g., profit, nonprofit, educational, small business, minority, women-owned, etc.;

(4) Name and telephone number of the principal investigator and business personnel who may be contacted during evaluation or negotiation;

(5) Identification of other organizations that are currently evaluating a proposal for the same efforts;

(6) Identification of the NRA, by number and title, to which the proposal is responding;

(7) Dollar amount requested, desired starting date, and duration of project;

(8) Date of submission; and

(9) Signature of a responsible official or authorized representative of the organization, or any other person authorized to legally bind the organization (unless the signature appears on the proposal itself).

c. Restriction on Use and Disclosure of Proposal Information. Information contained in proposals is used for evaluation purposes only. Offerors or quoters should, in order to maximize protection of trade secrets or other information that is confidential or privileged, place the following notice on the title page of the proposal and specify the information subject to the notice by inserting appropriate identification, such as page numbers, in the notice. In any event, information contained in proposals will be protected to the extent permitted by law, but NASA assumes no liability for use and disclosure of information not made subject to the notice.

Notice

Restriction on Use and Disclosure of Proposal Information. The information (data) contained in [insert page numbers or other identification] of this proposal constitutes a trade secret and/or information that is commercial or financial and confidential or privileged. It is furnished to the Government in confidence with the understanding that it will not, without permission of the offeror, be used or disclosed other than for evaluation purposes; provided, however, that in the event a contract (or other agreement) is awarded on the basis of this proposal the Government shall have the right to use and disclose this information (data) to the extent provided in the contract (or other agreement). This restriction does not limit the Government's right to use or disclose this information (data) if obtained from another source without restriction.

d. Abstract. Include a concise (200-300 word if not otherwise specified in the NRA) abstract describing the objective and the method of approach.

e. Project Description. (1) The main body of the proposal shall be a detailed statement of the work to be undertaken and should include objectives and expected significance; relation to the present state of knowledge; and relation to previous work done on the project and to related work in progress elsewhere. The statement should outline the plan of work, including the broad design of experiments to be undertaken and a description of experimental methods and procedures. The project description should address the evaluation factors in these instructions and any specific factors in the NRA. Any substantial collaboration with individuals not referred to in the budget or use of consultants should be described. Subcontracting significant portions of a research project is discouraged.

(2) When it is expected that the effort will require more than one year, the proposal should cover the complete project to the extent that it can be reasonably anticipated. Principal emphasis should be on the first year of work, and the description should distinguish clearly between the first year's work and work planned for subsequent years.

f. Management Approach. For large or complex efforts involving interactions among numerous individuals or other organizations, plans for distribution of responsibilities and arrangements for ensuring a coordinated effort should be described. Intensive working relations with NASA field centers that are not logical inclusions elsewhere in the proposal should be described.

g. Personnel. The principal investigator is responsible for supervision of the work and participates in the conduct of the research regardless of whether or not compensated under the award. A short biographical sketch of the principal investigator, a list of principal publications and any exceptional qualifications should be included. Omit social security number and other personal items which do not merit consideration in evaluation of the proposal. Give similar biographical information on other senior professional personnel who will be directly associated with the project. Give the names and titles of any other scientists and technical personnel associated substantially with the project in an advisory capacity. Universities should list the approximate number of students or other assistants, together with information as to their level of academic attainment. Any special industry-university cooperative arrangements should be described.

h. Facilities and Equipment. (1) Describe available facilities and major items of equipment

especially adapted or suited to the proposed project, and any additional major equipment that will be required. Identify any Government-owned facilities, industrial plant equipment, or special tooling that are proposed for use.

(2) Before requesting a major item of capital equipment, the proposer should determine if sharing or loan of equipment already within the organization is a feasible alternative. Where such arrangements cannot be made, the proposal should so state. The need for items that typically can be used for research and non-research purposes should be explained.

i. **Proposed Costs.** (1) Proposals should contain cost and technical parts in one volume: do not use separate "confidential" salary pages. As applicable, include separate cost estimates for salaries and wages; fringe benefits; equipment; expendable materials and supplies; services; domestic and foreign travel; ADP expenses; publication or page charges; consultants; subcontracts; other miscellaneous identifiable direct costs; and indirect costs. List salaries and wages in appropriate organizational categories (e.g., principal investigator, other scientific and engineering professionals, graduate students, research assistants, and technicians and other non-professional personnel). Estimate all manpower data in terms of man-months or fractions of full-time.

(2) Explanatory notes should accompany the cost proposal to provide identification and estimated cost of major capital equipment items to be acquired; purpose and estimated number and lengths of trips planned; basis for indirect cost computation (including date of most recent negotiation and cognizant agency); and clarification of other items in the cost proposal that are not self-evident. List estimated expenses as yearly requirements by major work phases. (Standard Form 1411 may be used).

(3) Allowable costs are governed by FAR Part 31 and the NASA FAR Supplement Part 1831 (and OMB Circulars A-21 for educational institutions and A-122 for nonprofit organizations).

j. **Security.** Proposals should not contain security classified material. If the research requires access to or may generate security classified information, the submitter will be required to comply with Government security regulations.

k. **Current Support.** For other current projects being conducted by the principal investigator, provide title of project, sponsoring agency, and ending date.

l. **Special Matters.** (1) Include any required statements of environmental impact of the research, human subject or animal care provisions, conflict of interest, or on such other topics as may be required by

the nature of the effort and current statutes, executive orders, or other current Government-wide guidelines.

(2) Proposers should include a brief description of the organization, its facilities, and previous work experience in the field of the proposal. Identify the cognizant Government audit agency, inspection agency, and administrative contracting officer, when applicable.

8. Renewal Proposals

a. Renewal proposals for existing awards will be considered in the same manner as proposals for new endeavors. A renewal proposal should not repeat all of the information that was in the original proposal. The renewal proposal should refer to its predecessor, update the parts that are no longer current, and indicate what elements of the research are expected to be covered during the period for which support is desired. A description of any significant findings since the most recent progress report should be included. The renewal proposal should treat, in reasonable detail, the plans for the next period, contain a cost estimate, and otherwise adhere to these instructions.

b. NASA may renew an effort either through amendment of an existing contract or by a new award.

9. Length

Unless otherwise specified in the NRA, effort should be made to keep proposals as brief as possible, concentrating on substantive material. Few proposals need exceed 15-20 pages. Necessary detailed information, such as reprints, should be included as attachments. A complete set of attachments is necessary for each copy of the proposal. As proposals are not returned, avoid use of "one-of-a-kind" attachments: their availability may be mentioned in the proposal.

10. Joint Proposals

a. Where multiple organizations are involved, the proposal may be submitted by only one of them. It should clearly describe the role to be played by the other organizations and indicate the legal and managerial arrangements contemplated. In other instances, simultaneous submission of related proposals from each organization might be appropriate, in which case parallel awards would be made.

b. Where a project of a cooperative nature with NASA is contemplated, describe the contributions expected from any participating NASA investigator and agency facilities or equipment which may be required.

The proposal must be confined only to that which the proposing organization can commit itself. "Joint" proposals which specify the internal arrangements NASA will actually make are not acceptable as a means of establishing an agency commitment.

11. Late Proposals

A proposal or modification received after the date or dates specified in an NRA may be considered if the selecting official deems it to offer NASA a significant technical advantage or cost reduction.

12. Withdrawal

Proposals may be withdrawn by the proposer at any time. Offerors are requested to notify NASA if the proposal is funded by another organization or of other changed circumstances which dictate termination of evaluation.

13. Evaluation Factors

a. Unless otherwise specified in the NRA, the principal elements (of approximately equal weight) considered in evaluating a proposal are its relevance to NASA's objectives, intrinsic merit, and cost.

b. Evaluation of a proposal's relevance to NASA's objectives includes the consideration of the potential contribution of the effort to NASA's mission.

c. Evaluation of its intrinsic merit includes the consideration of the following factors, none of which is more important than any other:

(1) Overall scientific or technical merit of the proposal or unique and innovative methods, approaches, or concepts demonstrated by the proposal.

(2) Offeror's capabilities, related experience, facilities, techniques, or unique combinations of these which are integral factors for achieving the proposal objectives.

(3) The qualifications, capabilities, and experience of the proposed principal investigator, team leader, or key personnel critical in achieving the proposal objectives.

(4) Overall standing among similar proposals and/or evaluation against the state-of-the-art.

d. Evaluation of the cost of a proposed effort includes the realism and reasonableness of the proposed cost and available funds.

14. Evaluation Techniques

Selection decisions will be made following peer and/or scientific review of the proposals. Several

evaluation techniques are regularly used within NASA. In all cases proposals are subject to scientific review by discipline specialists in the area of the proposal. Some proposals are reviewed entirely in-house, others are evaluated by a combination of in-house and selected external reviewers, while yet others are subject to the full external peer review technique (with due regard for conflict-of-interest and protection of proposal information), such as by mail or through assembled panels. The final decisions are made by a NASA selecting official. A proposal which is scientifically and programmatically meritorious, but not selected for award during its initial review, may be included in subsequent reviews unless the proposer requests otherwise.

15. Selection for Award

a. When a proposal is not selected for award, and the proposer has indicated that the proposal is not to be held for subsequent reviews, the proposer will be notified. NASA will explain generally why the proposal was not selected. Proposers desiring additional information may contact the selecting official who will arrange a debriefing.

b. When a proposal is selected for award, negotiation and award will be handled by the procurement office in the funding installation. The proposal is used as the basis for negotiation. The contracting officer may request certain business data and may forward a model contract and other information which will be of use during the contract negotiation.

16. Cancellation of NRA

NASA reserves the right to make no awards under this NRA and to cancel this NRA. NASA assumes no liability for canceling the NRA or for anyone's failure to receive actual notice of cancellation. Cancellation may be followed by issuance and synopsis of a revised NRA, since amendment of an NRA is normally not permitted.

Required Formats for Supplementary Information with Submitted Proposals

Cover Sheet

Proposal Abstract

Full Budget Summary

Yearly Budget Summary

Current and Pending Support

Certification Forms

Ancient Martian Meteorite Research Cover Sheet

NRA #: 96-OSS-14	NRA Title: Ancient Martian Meteorite (AMM) Research Program
Program:	

Principal Investigator			
<i>Title</i>	<i>First Name</i>	<i>Middle Name</i>	<i>Last Name</i>
Department			
Company/Institution			
Street Address		City/Town	
State	Zip/Postal	Country	
Telephone	Fax	E-Mail Address	
Principal Investigator's Signature			

Proposal Title

Co-Investigator(s) Name	Institution	E-mail

Institutional Endorsement	
Name of Official	
Administrative Authority	
Institution	
Signature	Date

Budget Summary			
	Year 1	Year 2	Total Funding
Amount Requested			

Abstract

Principal Investigator(s)			
<i>Title</i>	<i>First Name</i>	<i>Middle Name</i>	<i>Last Name</i>
Proposal Title			
Type single-spaced within the space provided below. List: 1) Goals, overall objectives and justification of the work; 2) Anticipated accomplishments listing what will be done this year, as well as how and why; 3) A few of the PI's relevant publications on separate page.			

FULL BUDGET SUMMARY

FROM: _____ to _____

TITLE OF INVESTIGATION:

PRINCIPAL INVESTIGATOR / INSTITUTION:

		<u>NASA USE ONLY</u>	
	A	B	C
1. Direct Labor (salaries, wages, and fringe benefits)	_____	_____	_____
2. Other Direct Costs:			
a. Subcontracts	_____	_____	_____
b. Consultants	_____	_____	_____
c. Equipment	_____	_____	_____
d. Supplies	_____	_____	_____
e. Travel	_____	_____	_____
f. Other	_____	_____	_____
3. Indirect Costs	_____	_____	_____
4. Other Applicable Costs	_____	_____	_____
5. Subtotal--Estimated Costs	_____	_____	_____
6. Less Proposed Cost Sharing	_____	_____	_____
7. Carryover Funds (if any)			
a. Anticipated amount	_____	_____	_____
b. Amount used to reduce budget	_____	_____	_____
8. Total Estimated Costs	_____	_____	XXXXXXXX
APPROVED BUDGET	XXXXXXXX	XXXXXXXX	_____

Instructions

1. Provide a separate Budget Summary sheet for each year of the proposal research.
2. Grantee estimated costs should be entered in Column A. Columns B and C are for NASA use only. Column C represents the approved grant budget.
3. Provide in attachments to the budget summary the detailed computations of estimates in each category, along with any narrative explanation required to fully explain proposed costs.

----- ADDITIONAL INSTRUCTIONS ON FOLLOWING PAGE -----

INSTRUCTIONS FOR BUDGET SUMMARY

1. Direct Labor (salaries, wages and fringe benefits). Enclosures should list number and titles of personnel, amount of time devoted to the grant, and rates of pay.
2. Other Direct Costs.
 - a. Subcontracts - Enclosures should describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting this effort.
 - b. Consultants - Identify consultants to be used, why they are necessary, time to be spent on the project, and rates of pay.
 - c. Equipment - List separately and explain the need for items of equipment exceeding \$1,000. Describe the basis for the estimated cost.
 - d. Supplies - Provide general categories of needed supplies, the method of acquisition, estimated cost, and the basis for the estimate.
 - e. Travel - List the proposed trips individually, describe their purpose in relation to the grant, provide dates and destinations where known, and explain how the cost for each was derived.
 - f. Other - Enter the total of any other direct costs not covered by 2.a through 2.e. Enclose an itemized list explaining the need for each item and the basis for the estimate.
3. Indirect Costs. Identify indirect cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. If unapproved rates are used, explain why and include a computational basis for the indirect expense pool and corresponding allocation base for each rate.
4. Other Applicable Costs. Enter the total of any other applicable costs not covered by instructions 1 through 3. Enclose an itemized list explaining the need for each item and the basis for the estimate.
5. Subtotal -- Estimated Costs. Enter the sum of items 1, 2.a through 2.f, 3, and 4.
6. Less Proposed Cost Sharing (if any). Enter the amount proposed, if any. If cost sharing is based on specific cost items, identify each item and amount in enclosures.
7. Carryover Funds (if any). Enter the dollar amount of any funds that are expected to be available for carryover from the prior budget period.
8. Total Estimated Costs. Enter the total after subtracting items 6 and 7 from item 5.

YEARLY BUDGET SUMMARY

FIRST YEAR BUDGET AND PERSONNEL SUMMARY BREAKDOWN

TITLE: _____

PRINCIPAL INVESTIGATOR & INSTITUTION: _____

SUMMARY OF FIRST YEAR PROPOSED COSTS: (nearest \$K)

- | | | |
|-----|--|----------|
| 1. | SALARIES AND WAGES | \$ _____ |
| 2. | SUPPLIES AND MATERIALS | \$ _____ |
| 3. | EQUIPMENT PURCHASES | \$ _____ |
| 4. | COMPUTER TIME (paid with PI funds) | \$ _____ |
| 5. | SERVICES | \$ _____ |
| 6. | PUBLICATIONS AND COMMUNICATIONS | \$ _____ |
| 7. | TRAVEL | \$ _____ |
| 8. | OTHER (INCLUDING BENEFITS AND OVERHEAD) | \$ _____ |
| 9. | SUBTOTAL FULL DURATION BUDGET | \$ _____ |
| 10. | INSTITUTIONAL CONTRIBUTIONS | \$ _____ |
| 11. | CARRYOVER FROM PREVIOUS AWARD | \$ _____ |
| 12. | TOTAL BUDGET REQUESTED FOR ALL YEARS | |
| | NEW FUNDS REQUESTED FROM NASA (LINE 9, 10, 11) | \$ _____ |

SUMMARY OF STAFFING REQUEST (NEAREST \$K, NEAREST 0.1 PERSON YEAR)

- | | | | |
|----|---------------------------------|----------|----------|
| 1. | SENIOR PERSONNEL (GIVE NAMES) | _____ py | \$ _____ |
| 2. | TECHNICAL SUPPORT (GIVE NUMBER) | _____ py | \$ _____ |
| 3. | OTHER | _____ py | \$ _____ |
| 4. | TOTALS | _____ py | \$ _____ |

LIST CURRENT AND PENDING RESEARCH SUPPORT FROM ALL OTHER SOURCES

This list should include all current research support from all other sources. It must include the proposed project and all other research requiring a part or portion of time of the principal investigator and other senior personnel. The number of person-months must be stated regardless of the source of the support. Please provide this information in the following form:

I. Name of Principal Investigator

A. Current Support

1. Source of Support
2. Project Title and Short Abstract
3. Award Amount
4. Period Covered by Award
5. Person-Months
6. Location where research is/will be performed

B. Pending Proposals (including renewal applications)

1. Source of Support
2. Project Title and Short Abstract
3. Award Amount
4. Period Covered by Award
5. Person-Months
6. Location where research is/will be performed

II. Names of Co-Investigators

A. Current Support

1. Source of Support
2. Project Title and Short Abstract
3. Award Amount
4. Period Covered by Award
5. Person-Months
6. Location where research is/will be performed

B. Pending Proposals (including renewal applications)

1. Source of Support
2. Project Title and Short Abstract
3. Award Amount
4. Period Covered by Award
5. Person-Months
6. Location where research is/will be performed

III. Other agencies to which this proposal, or parts thereof, has been submitted.

CERTIFICATION REGARDING DRUG-FREE WORKPLACE REQUIREMENTS

This certification is required by the regulations implementing the Drug-Free Workplace Act of 1988, 34 CFR Part 85. Subpart F. The regulations, published in the January 31, 1989 Federal Register, require certification by grantees, prior to award, that they will maintain a drug-free workplace. The certification set out below is a material representation of fact upon which reliance will be placed when the agency determines to award the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government-wide suspension or debarment (see 34 CFR Part 85, Sections 85.615 and 85.620).

I. GRANTEES OTHER THAN INDIVIDUALS

A. The grantee certifies that it will provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing a drug-free awareness program to inform employees about --
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction;
- (e) Notifying the agency within ten days after receiving notice under subparagraph (d) (2) from an employee or otherwise receiving actual notice of such conviction;
- (f) Taking one of the following actions, within 30 days of receiving notice under subparagraph (d) (2), with respect to any employee who is so convicted --
 - (1) Taking appropriate personnel action against such an employee, up to and including termination; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or Local health, Law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f)

B. The grantee shall insert in the space provided below the site(s) for the performance or work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

Check _____ if there are workplaces on file that are not identified here.

II. GRANTEES WHO ARE INDIVIDUALS

The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance in conducting any activity with the grant.

Organization Name

AO or NRA Number and Title

Printed Name and Title of Authorized Representative

Signature

Date

Printed Principal Investigator Name

Proposal Title

**CERTIFICATION REGARDING
LOBBYING**

As required by S 1352 Title 31 of the U.S. Code for persons entering into a grant or cooperative agreement over \$100,000, the applicant certifies that:

- (a) No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, in connection with making of any Federal grant, the entering into of any cooperative, and the extension, continuation, renewal, amendment, or modification of any Federal grant or cooperative agreement;
- (b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting an officer or employee of any agency, Member of Congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (c) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subgrants, contracts under grants and cooperative agreements, and subcontracts), and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by S1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Organization Name

AO or NRA Number and Title

Printed Name and Title of Authorized Representative

Signature

Date

Printed Principal Investigator Name

Proposal Title

**CERTIFICATION REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
PRIMARY COVERED TRANSACTIONS**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participants' responsibilities. The regulations were published as Part VII of the May 28, 1988 Federal Register (pages 19160-19211). Copies of the regulations may be obtained by contacting the U.S. Department of Education, Grants and Contracts Service, 400 Maryland Avenue, S.W. (Room 3633 GSA Regional Office Building No. 3), Washington, D.C. 20202-4725, telephone (202) 732-2505.

A. The applicant certifies that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three-year period preceding this application been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or Local) with commission of any of the offenses enumerated in paragraph A.(b) of this certification;
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or Local) terminated for cause or default; and

B. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

C. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lowered Tier Covered Transactions (Subgrants or Subcontracts)

- (a) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principles is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department of agency.
- (b) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Organization Name

AO or NRA Number and Title

Printed Name and Title of Authorized Representative

Signature

Date

Printed Principal Investigator Name

Proposal Title

NASA Research Announcement (NRA)/Announcement of Opportunity (AO) Mailing List Update

If your current address is NOT up-to-date, please fill out this form completely.

This is the update form for the NASA Office of Space Sciences (OSS) NRA/AO mailing list. Please fill out CONTACT INFORMATION completely. Check only those that apply in Institution Type and Discipline. Fold the form, secure with tape, and mail it back to the address on the reverse side. Proper postage must be applied.

MUST CHECK ONE

Please check which announcements you would like to receive:

- ☐ 1. NASA Research Announcements (basic, non-flight, on-going research)
☐ 2. Announcements of Opportunity (specific space flight mission)

Must check one, please include code number from mailing label:

- ☐ 1. Please add my name to the mailing list.
☐ 2. Please remove my name from the mailing list (please attach mailing label)
☐ 3. Please update my current listing.

CONTACT INFORMATION

If your address has changed or your mailing label is incorrect, please provide COMPLETE contact information.

Code Number: (obtain from mailing label)	<input type="text"/>	Salutation: (Mr., Mrs., Ms., Dr., Prof., etc.)	<input type="text"/>	Suffix: (Ret., PhD., Jr., III, etc.)	<input type="text"/>
First Name:	<input type="text"/>	MI:	<input type="text"/>	Last Name:	<input type="text"/>
Organization:	<input type="text"/>				
Division / Department:	<input type="text"/>				
Street:	<input type="text"/>				
City:	<input type="text"/>	State:	<input type="text"/>	Zip:	<input type="text"/>
Telephone No:	<input type="text"/>	Fax No:	<input type="text"/>		
E-Mail Address:	<input type="text"/>		Internet Address:	<input type="text"/>	
Country: (foreign addresses, please specify)	<input type="text"/>				

Institution Type

(check only those that apply)

- | | | |
|--|---|---|
| <input type="checkbox"/> 1. College or University | <input type="checkbox"/> 4. Minority Business | <input type="checkbox"/> 7. Other Government Agency |
| <input type="checkbox"/> 2. Minority College or University | <input type="checkbox"/> 5. NASA HQs/Center | <input type="checkbox"/> 8. Private Industry |
| <input type="checkbox"/> 3. Foreign Addressee | <input type="checkbox"/> 6. Nonprofit Corporation | <input type="checkbox"/> 9. Small Business |

Societies:

- ☐ A. American Astronomical Society ☐ B. American Geophysical Union ☐ C. Others _____

Discipline:

(check only those that apply)

MUST CHECK AT LEAST ONE

1. Astronomy and Astrophysics

- ☐ A. Theory and Modeling
☐ B. Instrumentation (Technology Dev)
☐ C. Laboratory Astrophysics
☐ D. Data Analysis (Archival)
☐ E. Observational Programs

2. Solar System Exploration

- ☐ A. Planetary Atmospheres and Astronomy
☐ B. Planetary Materials and Geochemistry
☐ C. Planetary Geology and Geophysics
☐ D. Instrument Development
☐ E. Origins of Solar Systems
☐ F. Exobiology

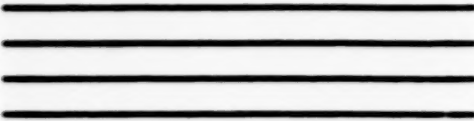
3. Space Physics

- ☐ A. Cosmic and Heliosphere Physics
☐ B. Solar Physics
☐ C. Magnetospheric Physics
☐ D. Iono-Thermo-Mesospheric Physics

4. Information Systems/Computer Science

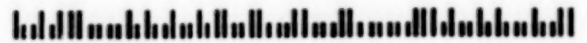
- ☐ A. High Performance Computing and Networking
☐ B. Scientific Data Analysis and Visualization
☐ C. Science Data Storage and Management
☐ D. Software Technology

Please Tape (Do not staple)



PLACE STAMP
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WASHINGTON DC 20546-0001



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UPDATE**

END

01-15-97